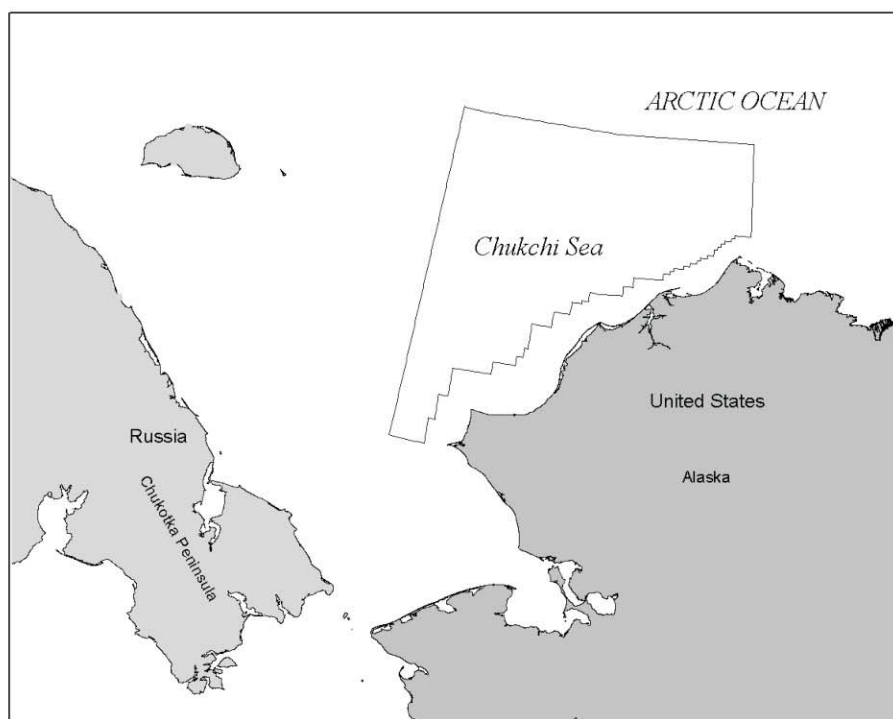


Chukchi Sea Planning Area

Oil and Gas Lease Sale 193 and Seismic Surveying Activities in the Chukchi Sea

Draft Environmental
Impact Statement

Volume II
Tables, Figures, Maps, and Appendices



U.S. Department of the Interior
Minerals Management Service
Alaska OCS Region

Alaska Outer Continental Shelf

OCS EIS/EA
MMS 2006-060

**Chukchi Sea Planning Area
Oil and Gas Lease Sale 193 and Seismic Surveying Activities
in the Chukchi Sea**

**Final Environmental
Impact Statement**

Volume II
(Tables, Figures, Maps, and Appendices)

Author
**Minerals Management Service
Alaska OCS Region**

Cooperating Agency
**U.S. Department of Commerce,
National Oceanographic and Atmospheric Administration,
National Marine Fisheries Service**

**U.S. Department of the Interior
Minerals Management Service
Alaska OCS Region**

October 2006

APPENDIX B

THREATENED AND ENDANGERED SPECIES CONSULTATION



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

June 16, 2006

John Goll
Director, Alaska Outer Continental Shelf Region
Minerals Management Service
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

Dear Mr. Goll:

This document transmits the National Marine Fisheries Service's (NMFS) Biological Opinion for Federal oil and gas leasing and exploration by the Minerals Management Service (MMS) within the Alaskan Beaufort and Chukchi Seas, and its effects on the endangered bowhead whale in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). Your March 3, 2006 letter to NMFS requested re-initiation of consultation in this matter. The MMS has provided a Biological Evaluation of leasing and exploration actions in the Beaufort and Chukchi Seas, which was received on March 15, 2006. We acknowledged receipt of this information in our letter dated April 5, 2006.

This Biological Opinion is based on information provided in the March 2006 Biological Evaluation and other sources of information. A complete administrative record of this consultation is on file at the NMFS offices in Anchorage.

NMFS concludes that leasing and exploration are not likely to jeopardize the continued existence of the bowhead whale. In formulating this opinion, NMFS used the best available information, including information provided by MMS, recent research on the effects of oil and gas activities on the bowhead whale, and the traditional knowledge of Native hunters and the Inupiat along Alaska's north slope. Although we conclude that foreseeable exploration activities are not likely to jeopardize the continued existence of the bowhead whale, we remain concerned about the potential additive effects of oil and gas activities associated with exploration, production, and transportation throughout the Beaufort and Chukchi Seas. Conservation recommendations are provided with the opinion which are intended to improve our understanding of the impacts of oil and gas activities on the bowhead whale, as well as to minimize or mitigate adverse effects.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region





United States Department of the Interior



MINERALS MANAGEMENT SERVICE
Alaska Outer Continental Shelf Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

SEP 21 2006

Memorandum

To: Regional Director, FWS, Region 7
From: Regional Director *John Hall*
Subject: Chukchi Sea Lease Sale 193: Endangered Species Act Section 7 Consultation

The Minerals Management Service (MMS) is completing a draft Environmental Impact Statement (DEIS) for the proposed Chukchi Sea Lease Sale 193. The Steller's and spectacled eider, both threatened species, and the Kittlitz's murrelet, a candidate species, occur in the proposed lease sale area. We have worked closely with the Fairbanks Endangered Species Branch in preparing the attached biological evaluation to evaluate the potential effects this lease sale could have on threatened and candidate birds.

We sent a previous draft of this biological evaluation to the Fairbanks Fish and Wildlife Field Office on July 17, 2006. We recently received some comments on the draft biological evaluation when Fish and Wildlife Services (FWS) personnel met with us on September 7, 2006. Those comments pertained to the need to calculate the anticipated incidental take from onshore developments should production occur following the lease sale. We were requested to address the potential for the Steller's eiders to be affected if an oil spill were to occur when they were concentrated in the spring-lead system and to more fully explain the most likely development scenario in terms of the potential for locating a commercially developable field. Our explanation of the oil spill risk analysis modeling was expanded to include combined probabilities. We revised the draft biological evaluation to address the FWS' comments and concerns.

We consider the attached biological evaluation a complete document for your review. We believe the biological evaluation satisfies the information requirements specified in 50 CFR 402.12 and 402.14. If you still require additional information or analysis, please contact us quickly as we anticipate including a copy of the biological evaluation in our DEIS, which is scheduled to go to the printer on October 3, 2006.

TAKE PRIDE
IN AMERICA 

Our biological evaluation determined that the proposed Chukchi Sea Lease Sale 193 would likely have the following level of effects on Steller's and spectacled eiders and Kittlitz's murrelets:

- Listed and Candidate Species
 - Lease Sale 193 could present new sources of disturbance, collision hazards, and oil/toxic pollution that could result in the taking of Steller's and spectacled eiders. Without comprehensive mitigation measures to avoid or minimize potential impacts, these activities *are likely to adversely affect* Steller's and spectacled eiders.
 - Lease Sale 193 could present new sources of disturbance and oil/toxic pollution that could result in the taking of Kittlitz's murrelet. Without comprehensive mitigation measures to avoid or minimize potential impacts, these activities *may affect* the Kittlitz's murrelet.
- Ledyard Bay Critical Habitat Area
 - Lease Sale 193 could present new activities that could result in the physical modification of seafloor habitats and decrease use of the Ledyard Bay Critical Habitat Area by molting spectacled eiders. Without comprehensive mitigation measures to avoid or minimize potential impacts, these activities *are likely to adversely modify* the Ledyard Bay Critical Habitat Area.

We request your opinion on these findings. If you determine a jeopardy situation may exist for all or any part of the proposed action, we ask that you respond to this memorandum in as timely a manner as possible, according to 50 CFR 402 14(g)(5), to allow the MMS and FWS staff time to jointly discuss the findings. We believe that such discussions will facilitate the consultation and ensure protection of listed species. These discussions will also ensure that any proposed alternatives are within our authority to control and implement, and are feasible, prudent, and effective. To facilitate completion of this consultation, we are sending a copy of this memorandum to the Fairbanks Fish and Wildlife Field Office in Fairbanks, Alaska.

If you have any questions on this consultation or require additional information, please contact Mr. Mark Schroeder at (907) 334-5247.

Attachment

cc: Field Office Supervisor
U.S. Fish and Wildlife Service
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

Fairbanks Fish and Wildlife Field Office

101 12th Avenue, Room 110

Fairbanks, Alaska 99701

January 5, 2005



Memorandum

To: Regional Director, Alaska OCS Region, Minerals Management Service

From: Endangered Species Branch Chief *Led Swem*

Subject: Section 7 Consultation- Chukchi Sea and Beaufort Sea OCS Planning Areas

This responds to your December 13, 2005 request for a list of endangered, threatened and candidate species and critical habitats pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). The following information is being provided for the Minerals Management Service's potential oil and gas activities that may occur in the Beaufort and Chukchi Sea Outer Continental Shelf (OCS) Planning Areas. The information below addresses the species and critical habitats present within those areas, which include the arctic coastal region from Point Hope eastward to the Canadian border. The following listed species are present in all or some portion of the planning areas:

Common Name	Scientific Name	Status	Present in Beaufort Sea	Present in Chukchi Sea
Steller's eider	<i>Polysticta stelleri</i>	threatened	yes	yes
Spectacled eider	<i>Somateria fischeri</i>	threatened	yes	yes
Kittlitz's murrelet	<i>Brachyramphus brevirostris</i>	candidate	likely	yes

Both planning areas provide marine habitat for the threatened spectacled eider and the threatened Alaska-breeding population of the Steller's eider. The Kittlitz's murrelet, a candidate species, discontinuously inhabits coastal waters of the Chukchi Sea to Barrow, so occurs within the Chukchi Sea Planning Area. Given that the species has been recorded near Barrow several times, it seems likely that it also occurs occasionally in the western Beaufort Sea, but to our knowledge no records yet exist to verify this.

Critical habitat for spectacled eiders exists in the southwest portion of the MMS Chukchi Sea Planning Area. The Ledyard Bay Unit of spectacled eider critical habitat includes marine waters within about 74 km (40 nm) from shore, from Cape Lisburne to Icy Cape, excluding waters less than 1.85 km (1nm) from shore. We assume that you have maps of these areas; please notify us if this is not the case. You are correct that no other

designated critical habitat occurs within either the Chukchi or Beaufort Sea Planning Areas.

You asked whether we foresee that either the polar bear (*Ursus maritimus*) or yellow-billed loon (*Gavia adamsii*) will be listed under the Act within the next two years. As you know, we have been petitioned to list both species, and the petitions set in motion a process that will ultimately culminate in a decision as to whether listing is warranted. In order to list either species, we would have to first make a positive 90-day finding (which would state, in effect, that listing *may* be warranted) and then conduct a much more thorough 12-month evaluation of all available information that results in a determination that listing *is* warranted. As 90-day findings have not been finalized, the status of both species is pre-decisional. Thus, we have no basis for speculating on the outcome of decisions yet to be made or 12-month evaluations yet to be conducted.

Finally, you also asked for confirmation that you need not consult on potential impacts of transporting oil from Valdez to ports along the Pacific coast and to the Far East. There has been no change in the Service's approach, so we concur that MMS does not need to include the transportation of oil in this consultation.

This species list applies only to endangered and threatened species under the jurisdiction of the U.S. Fish and Wildlife Service. Please contact the National Oceanic and Atmospheric Administration - Fisheries for information on the status of listed and proposed species under their jurisdiction in the shoreline and off-shore action areas.

Thank you for your cooperation in meeting our joint responsibilities under the Act. If you have any questions on this consultation or require further information, please contact Dr. Jewel Bennett with the Fairbanks Fish and Wildlife Field Office at (907) 456-0239.

cc: Dr. Lisa Rotterman



United States Department of the Interior

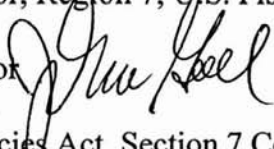


MINERALS MANAGEMENT SERVICE
Alaska Outer Continental Shelf Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

DEC 13 2005

Memorandum

To: Regional Director, Region 7, U.S. Fish and Wildlife Service

From: Regional Director 

Subject: Endangered Species Act, Section 7 Consultation Chukchi Sea and Beaufort Sea OCS Planning Areas

The Minerals Management Service (MMS) is undertaking assessment of potential environmental effects related to potential oil and gas leasing and exploration activities that may occur in the Beaufort Sea and Chukchi Sea Outer Continental Shelf (OCS) Planning Areas. We have delineated these two areas in the attachment which reflects the areas as shown in the Final Environmental Impact Study (EIS) for our current (2002-2007) 5-Year OCS Leasing Program. The proposed activities include 1) seismic surveys that could begin in June 2006 in the Chukchi Sea and in the Beaufort Sea later in the 2006 open water season; 2) proposed Beaufort Sea Oil and Gas Lease Sale 202 (currently scheduled for March 2007) and related exploration; and 3) proposed Chukchi Sea Oil and Gas Lease Sale 193 (potentially to be held in November 2007 if approved by the Secretary to be included in the 2007-2012 5-Year OCS Leasing Program) and related exploration (www.mms.gov/alaska/). As required under Section 7 of the Endangered Species Act (ESA), MMS will be evaluating potential effects of these actions to species listed, and habitat designated as critical, under the ESA and consulting with the U.S. Fish and Wildlife Service (FWS) regarding the aforementioned actions.

The MMS has recently consulted with FWS regarding leasing and exploration activities in the Beaufort Sea Planning Area. The FWS prepared a Biological Opinion for Sale 186, 195 and 202, dated October 23, 2002. That opinion, which included reasonable and prudent measures and conservation recommendations, concluded with a statement of "no jeopardy." In this Biological Opinion, the FWS stated that: "The MMS requested programmatic Section 7 consultation for proposed Beaufort Sea lease sales from 2003 through 2007 identified as Lease Sales 186, 195, and 202...Based upon the information contained in any future EA or supplemental EIS, the MMS will reinstate programmatic consultation on Lease Sales 195 and/or 202 at later dates if new information comes to light that would trigger the need for reinstatement." The FWS upheld the no jeopardy statement for Sale 195 in a memorandum dated January 1, 2004. At this point, we have not yet completed our review of information that has become available since late 2003 to determine whether we will need to formally reinstate consultation with you on actions that may occur within the Beaufort Sea Planning Area. We expect this

TAKE PRIDE[®]
IN AMERICA 

review and related analyses to be completed very early in 2006 and will contact you then.

The MMS has not consulted with FWS on oil and gas activities in the Chukchi Sea Planning area since 1990, at which time the consultation was focused only on potential effects to the Arctic peregrine falcon (*Falco peregrinus tundrius*), a species which has subsequently been removed from the list of threatened and endangered species.

In accordance with the ESA's Section 7 regulations governing interagency cooperation, MMS intends to prepare at least two biological evaluations in the near future: the first focused on potential effects of seismic survey activities in the Chukchi Sea (which may occur as early as next summer) and the second in which we will look at a broader range of activities that might be associated with the proposed Chukchi Sea OCS Oil and Gas Lease Sale 193. In these evaluations, we will describe the actions and specific areas being considered in the consultation, describe the listed species and critical habitats that may be affected by those actions, evaluate potential effects and cumulative effects on listed species and critical habitats, and provide other relevant information necessary for FWS to prepare biological opinions.

By this letter, we request that the FWS specify what ESA listed, proposed, or candidate species, as well as designated critical habitat, may be in or near the Beaufort Sea Planning Area and/or in or near the Chukchi Sea Planning Area. We will use this list to prepare our evaluation of potential effects to ESA-listed species from the aforementioned actions. At present, based on your October 2002 Biological Opinion, your January 2004 memorandum, and our review of other available information, we are aware of the following species with status under the ESA for which FWS has management authority that may be in or near the Beaufort Sea Planning Area or the Chukchi Sea Planning Area and that may potentially be affected by proposed MMS actions in one or both of those areas:

<u>Common Name</u>	<u>Scientific Name</u>	<u>ESA Status</u>	<u>Present in Beaufort Sea</u>	<u>Present in Chukchi Sea</u>
Spectacled eiders	(<i>Somateria fischeri</i>)	threatened	yes	yes
Steller's eiders	(<i>Polysticta stelleri</i>)	threatened	yes	yes
Kittlitz's murrelets	(<i>Brachyramphus brevirostris</i>)	candidate	no	yes

We are aware that there is designated critical habitat for spectacled eiders within and adjacent to Ledyard Bay in the eastern Chukchi Sea. We are not aware of any other designated critical habitat within the Chukchi Sea or of any designated critical habitat for any species within or adjacent to the Beaufort Sea Planning Area.

We are also aware that the FWS has received petitions to list polar bears (*Ursus maritimus*) (petition in February 2005) and the yellow-billed loon (*Gavia adamsii*) (petition in March 2004) under the ESA. We request that you inform us as to whether you foresee that either, or both, of these two species is likely to be listed, or designated as candidate species for listing, under the ESA within the next two years.

Please notify us of your concurrence with, or necessary revisions to, the above list of species and add any critical habitats which you believe would need to be considered in any biological evaluations related to MMS proposed actions in each of these two planning areas.

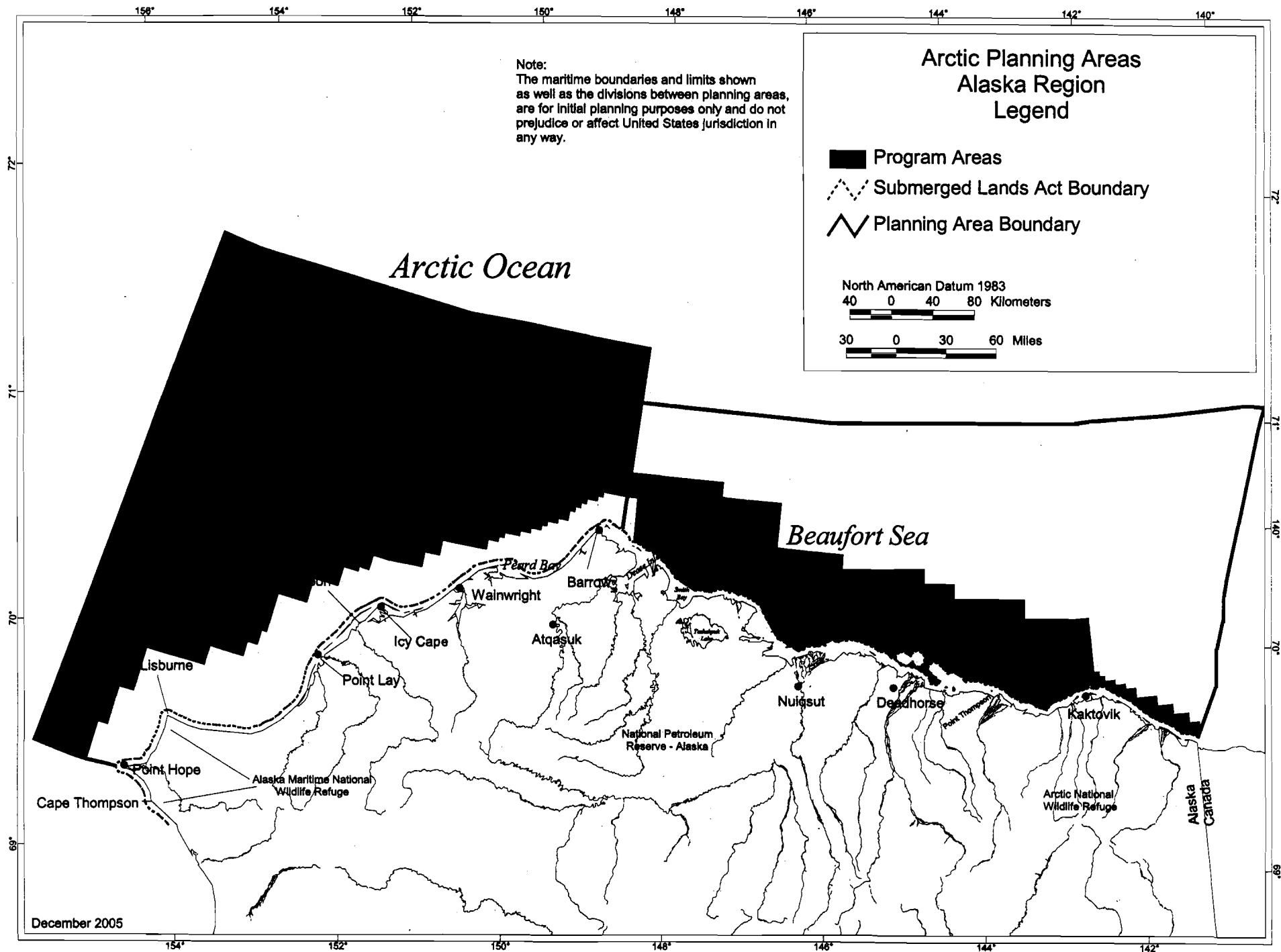
Lastly, we ask that you reaffirm FWS's conclusion in recent consultations (e.g., the consultation on the Beaufort Sea Lease Sales 186, 195, and 202) that MMS does not need to consult on species along the transportation corridor from Valdez to ports along the Pacific coast and to the Far East.

We request that you respond to this memorandum in as timely a manner as possible. Upon receipt of your reply within 30 days, we will begin preparation of our biological evaluations, reviewing potential effects of Federal oil and gas leasing and exploration by MMS within the Alaskan Beaufort Sea and the Chukchi Sea. To facilitate consideration of our request for concurrence, we are sending copies of this letter to the Northern Alaska Ecological Services' Office in Fairbanks.

If you have any questions on this consultation request or require additional information, please contact Dr. Lisa Rotterman, Minerals Management Service, 3801 Centerpoint Drive, Suite 500, Anchorage, Alaska 99503-5823 (commercial and FTS telephone: 907-334-5245) (lisa.rotterman@mms.gov) or Ms. Jill Lewandowski, Minerals Management Service, Mail Stop 4042, 381 Elden Street, Herndon, Virginia 20170-4817 (commercial and FTS telephone: 703-787-1703).

Attachment

cc: Mr. Steve Lewis, FWS
Judy Wilson, Chief ECU (MS 4042)
Jill Lewandowski, ENVD-EAB





**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

September 30, 2005

John Goll
Regional Director
Minerals Management Service
Alaska Outer Continental Shelf Region
3801 Centerpoint Drive, Suite 500
Anchorage, AK. 99503-5823

Dear Mr. Goll:

The National Marine Fisheries Service (NMFS) has received your letter requesting information on the presence of threatened or endangered species and their designated critical habitat which occur in the Alaska Beaufort Sea and Chukchi Sea planning areas.

The following species is listed under the Federal Endangered Species Act and is found in these areas:

Bowhead Whale (*Balaena mysticetus*).....Endangered

Critical habitat has not been designated for the bowhead whale.

Additionally, the endangered humpback (*Megaptera novaeangliae*) and fin whale (*Balaenoptera physalus*) are found in waters of the Chukchi Sea and Bering Sea outside of the subject planning areas. These animals could be impacted secondarily by OCS activities. NMFS recommends their inclusion in your evaluation. NMFS also recommends the evaluation provide a comprehensive assessment of OCS activities on threatened and endangered species, and, to accomplish this, include all deferrals within these planning areas.

We hope this information will be useful in your section 7 determinations. Please direct any questions to Brad Smith in our Anchorage office, (907) 271-3023.

Sincerely,

Kaja Brix
Assistant Regional Administrator
for Protected Resources





United States Department of the Interior



MINERALS MANAGEMENT SERVICE
Alaska Outer Continental Shelf Region
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

AUG 12 2005

James W. Balsiger, Ph.D.
Regional Administrator, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Dear Dr. Balsiger:

The Minerals Management Service (MMS) proposes to reinitiate consultation under Section 7 of the Endangered Species Act (ESA) on oil and gas leasing and exploration activities on two Outer Continental Shelf (OCS) Planning Areas in the arctic. Specifically, we propose to reinitiate following the Arctic Regional Biological Opinion (ARBO) approach used in the past, so that the geographic area considered in the consultation is expanded to again include potential activities that could occur within the entire Beaufort Sea Planning Area and within the Chukchi Sea OCS Program Area, as delineated in the Attachment which is reproduced from the Final EIS for our current 5-Year OCS Leasing Program. Note that the current 5-Year Leasing Program excludes the nearshore Polynya area from leasing consideration in the Chukchi Sea. Below we briefly summarize relevant background.

In November 1988, the National Marine Fisheries Service (NMFS) prepared the Arctic Regional Biological Opinion (ARBO) which concerned leasing and exploration activities in the Arctic Region (Beaufort Sea, Chukchi Sea, and Hope Basin OCS Planning Areas). Because of the removal of the gray whale from the list of threatened and endangered species, the availability of new information on the potential impacts of oil and gas-related noise on bowhead whales, the use of new seismic survey technology in the Arctic, and trends in OCS activities in the Arctic Region, MMS proposed to reinitiate consultation with NMFS on November 2, 1999. Because of lack of industry interest in the Chukchi Sea and Hope Basin Planning Areas at that time, MMS proposed, and NMFS agreed, to limit the reinitiated consultation to leasing and exploration activities only in the Beaufort Sea Planning Area. Thus, in the resultant, and most current, Biological Opinion of May 25, 2001, NMFS concluded that

“Present and foreseeable future oil and gas exploration activities on the Alaskan OCS are likely to occur only in the Beaufort Sea.”

Because of this assumption, which was based on the best information available at the time, the action area for the May 2001 biological opinion was defined as the Alaskan Beaufort Sea OCS Planning Area, extending from the Canadian border to the Barrow area.

TAKE PRIDE[®]
IN AMERICA 

Due to industry response to our recent Beaufort Sea lease sales and call for information and nominations in the Chukchi Sea, and based on discussions with industry, the aforementioned assumption is no longer valid. Therefore, we would like to reinitiate consultation with your agency on leasing and exploration activities in areas of both the Beaufort Sea and the Chukchi Sea, as specified above.

In accordance with the Endangered Species Act Section 7 regulations governing interagency cooperation, MMS intends to prepare a biological evaluation in which we describe the actions and specific areas being considered in the consultation, describe the listed species and critical habitats that may be affected by those actions, evaluate potential effects and cumulative effects on listed species and critical habitats, and provide other relevant information necessary for NMFS to prepare their biological opinion.

By this letter, we are notifying you of the listed species and critical habitat that we, with your concurrence, expect to include in our biological evaluation. Based on previous correspondence with NMFS on this issue and based on our review of available information, MMS is aware of only one listed species, the endangered bowhead whale, that commonly occurs in these two planning areas. However, based on NMFS' November 1988 Biological Opinion, and, in some cases, other information suggesting the possible occurrence of other listed species in areas within or near these two planning areas, MMS currently intends to review and consider the following listed species in our biological evaluation:

<u>Common Name</u>	<u>Scientific Name</u>	<u>ESA Status</u>
Bowhead whale	<i>Balaena mysticetus</i>	Endangered
Fin whale	<i>Balaenoptera physalus</i>	Endangered
Humpback whale	<i>Megaptera novaeangliae</i>	Endangered
Right whale	<i>Eubalaena glacialis</i>	Endangered
Sei whale	<i>Balaenoptera borealis</i>	Endangered

We have included right and sei whales on this species list because, in your biological opinion of November 1988 (page 3), NMFS stated that these species were among "...six species of endangered whales that inhabit Arctic Region waters of Alaska." On page 4 of the 1988 ARBO, NMFS stated that "The right and sei whales are rare in Arctic waters. They are represented by isolated records in the Chukchi Sea, probably of stray individuals well outside the normal ranges of their populations." We believe that information available since that opinion supports this conclusion.

MMS is not aware of any designated or proposed critical habitat for any species that is under the jurisdiction of NMFS and that occurs within, near, or that could potentially be affected by leasing or exploration activities within, the Beaufort Sea or Chukchi Sea.

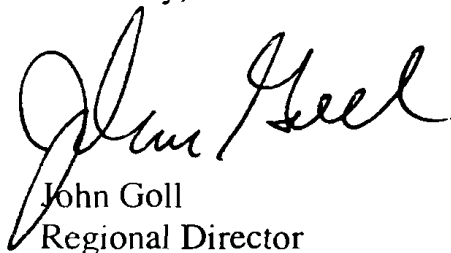
Please notify us of your concurrence with, or necessary revisions to, the above list of species and add any critical habitats which you believe need to be considered in our biological evaluation. In addition, we ask that you specify whether we should include Eastern North Pacific gray whales (*Eschrichtius robustus*) in our evaluation. While this population of gray whales was removed from the list of threatened and endangered species in 1994, NMFS's Biological Opinion on Oil

and Gas Lease Sales 191 and 199 in the Cook Inlet OCS Planning Area included a "...general assessment of the effects of the action on gray whales as part of NMFS' continuing responsibility to monitor the status of the species." Lastly, we ask that you reaffirm NMFS's conclusion in recent consultations (e.g., the consultation on the Beaufort Sea Lease Sales 186, 195, and 202) that MMS does not need to consult on species along the transportation corridor from Valdez to ports along the Pacific coast and to the Far East.

To facilitate consideration of our request for concurrence, we are sending copies of this letter to your Anchorage Field Office. Upon receipt of your reply within 30 days, we will begin preparation of our biological evaluation reviewing potential effects of Federal oil and gas leasing and exploration by MMS within the Alaskan Beaufort Sea and the Chukchi Sea.

If you have any questions on the issues raised in this letter or require additional information, please contact Dr. Lisa Rotterman, Minerals Management Service, Mail Stop 8303, 3801 Centerpoint Drive, Suite 500, Anchorage Alaska 99503-5823 (commercial and FTS telephone: 907-334-5245)

Sincerely,

A handwritten signature in black ink, appearing to read "John Goll", written over a printed name and title.

John Goll
Regional Director

Enclosure

cc: (w/enclosure)

Mr. Brad Smith
Anchorage Field Office
National Marine Fisheries Service
Federal Building
22 West 7th Avenue, Box 43
Anchorage Alaska 99513-7577

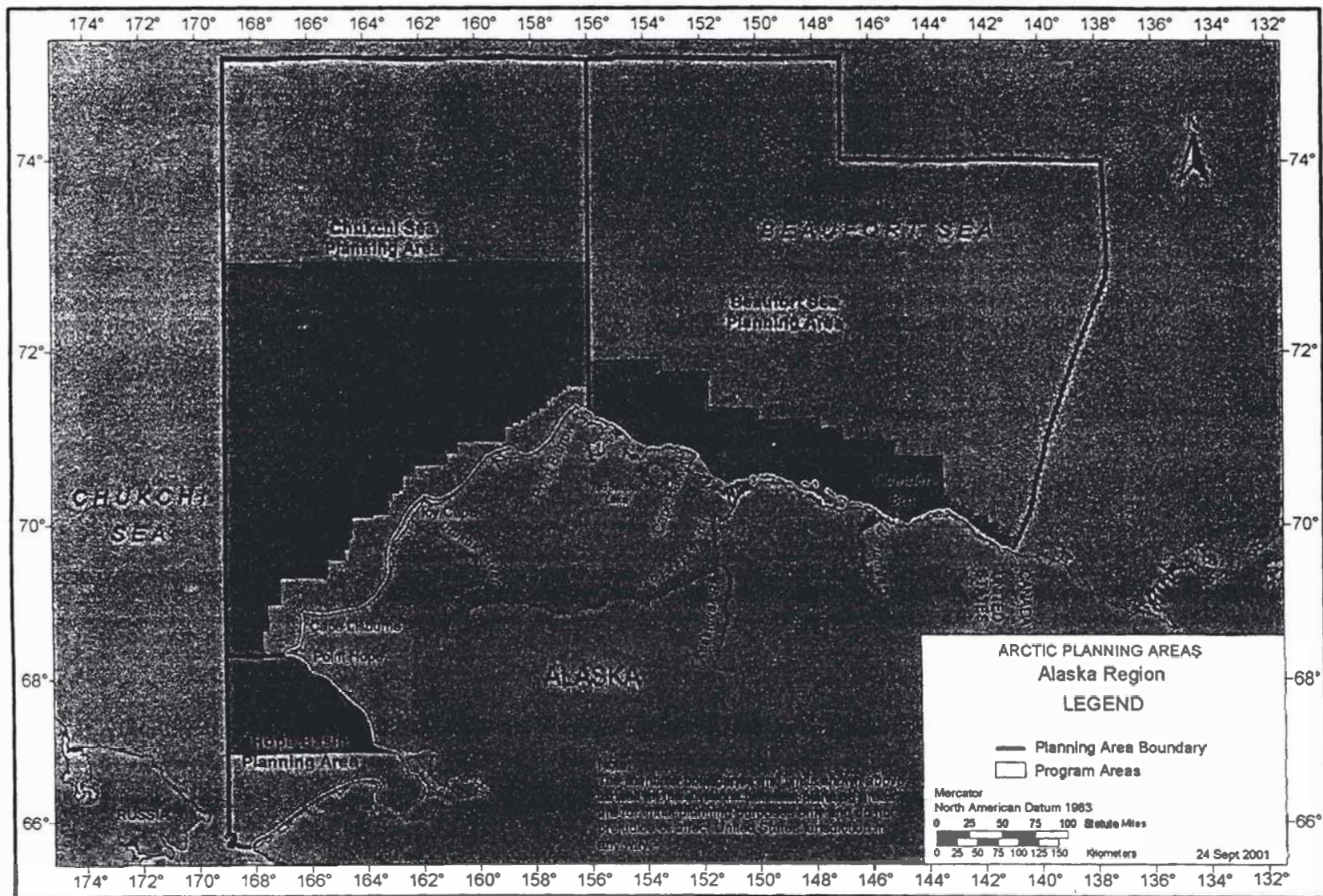


Figure 2-3. Beaufort Sea, Chukchi Sea, and Hope Basin Planning Areas - Alaska Region

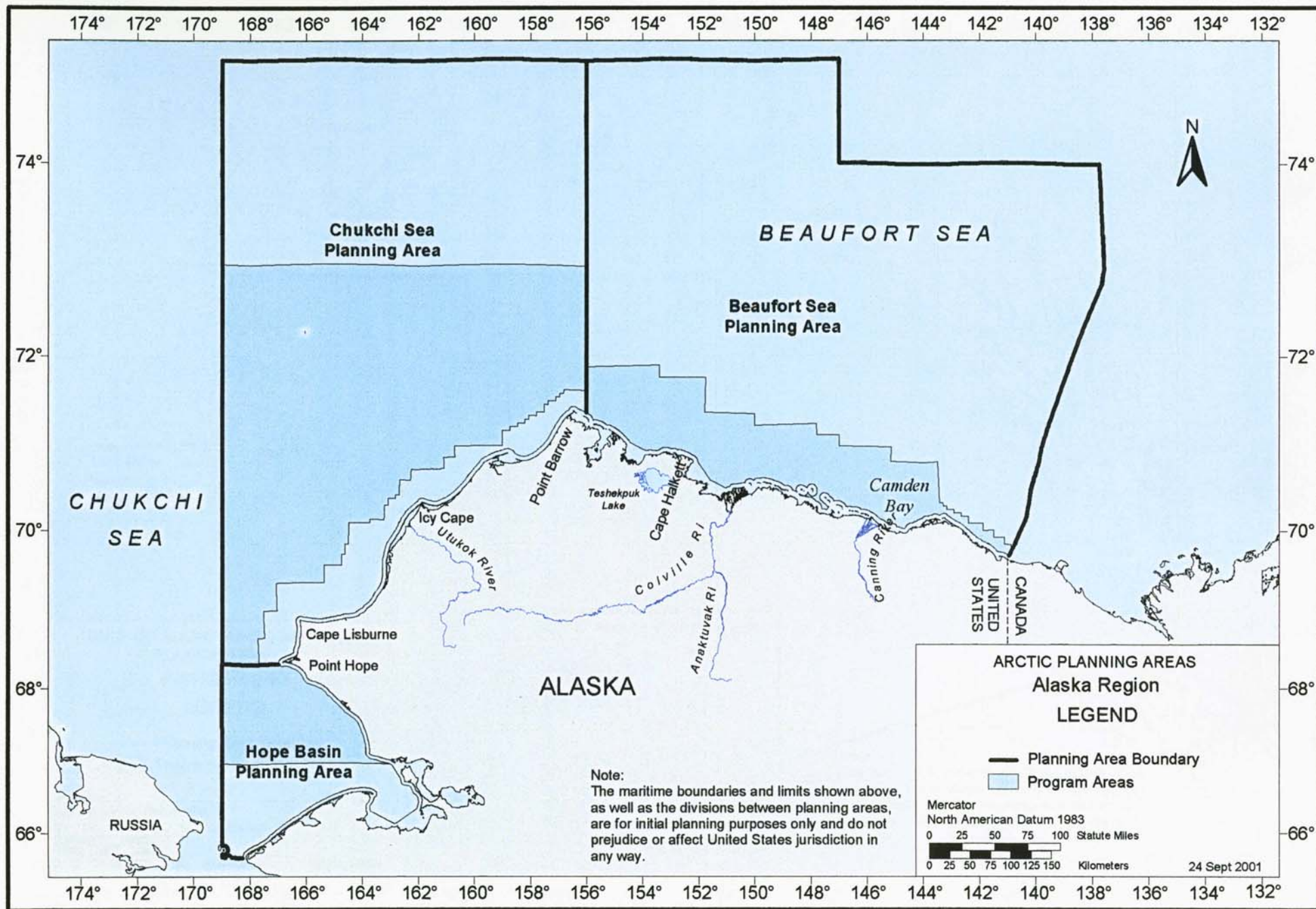


Figure 2-3. Beaufort Sea, Chukchi Sea, and Hope Basin Planning Areas - Alaska Region